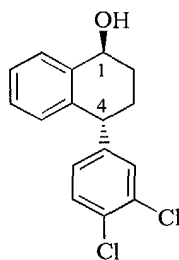


Amendments to the Claims:

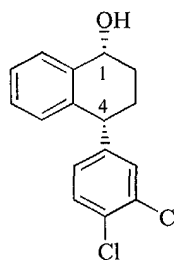
This listing of claims will replace all prior versions, and listings, of claims in the above-identified Application:

Listing of Claims:

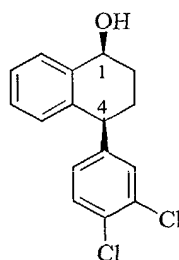
Claim 1 (currently amended): A composition of matter prepared from a crude preparation of a microorganism, said composition of matter having a reductase activity, said reductase activity stereoselectively reducing racemic 4-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone, where said racemic 4-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone is a mixture of (4S)-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone and (4R)-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone, where said racemic 4-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone is stereoselectively reduced to a mixture of cis and trans tetralols having the formulae:



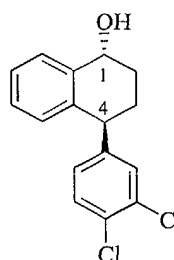
(trans) (1S, 4R) tetralol,



(cis) (1R, 4R) tetralol,



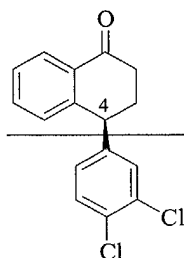
(cis) (1S, 4S) tetralol, and



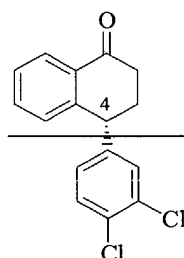
(trans) (1R, 4S) tetralol.

while leaving substantially unreacted (4S)-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone, resulting in unreacted (4S)-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone being present in ee greater than 50%, and unreacted (4R)-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone being present in ee less than 50%, where said microorganism is selected from the group consisting of *Hansenula polymorpha* ATCC No. 26012, *Hansenula polymorpha* ATCC No. 74449, and such mutants thereof capable of accomplishing said reduction;

~~said microorganism selected from the group consisting of *Hansenula polymorpha* ATCC No. 26012, *Hansenula polymorpha* ATCC No. 74449, and such mutants thereof capable of accomplishing the stereoselective reduction of racemic 4-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone, where said racemic 4-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone is a mixture of (4S)-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone and (4R)-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone having the formulae~~

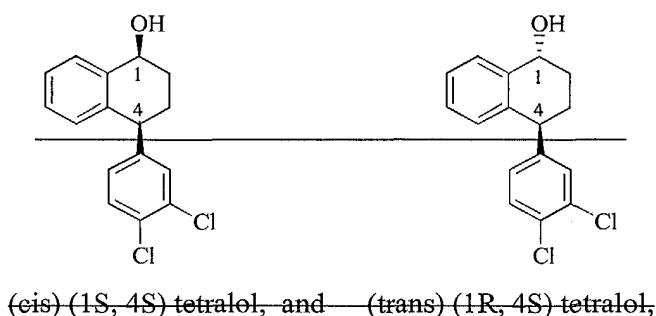
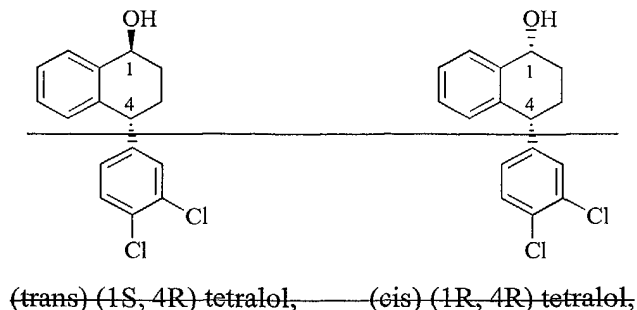


~~—————(4S)-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone, and—————~~



~~—————(4R)-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone,~~

to a mixture of cis and trans tetralols having the formulae:



where said reduction comprises: contacting said racemic 4-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone with said composition of matter; incubating the resulting mixture under conditions sufficient to yield said (trans) (1S, 4R) tetralol, said (cis) (1R, 4R) tetralol, said (trans) (1R, 4S) tetralol, and said (cis) (1S, 4S) tetralol, and to leave substantially unreacted said (4S) (3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone; and recovering said unreacted (4S) (3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone from said resulting mixture, by the process of:

preparing a said crude fraction of said microorganism by: contacting said microorganism with said racemic 4-(3,4-dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenone under conditions sufficient to permit the induction of an enzyme activity capable of said reduction; incubating the resulting mixture under conditions sufficient to permit the induction of said reductase activity; centrifuging said incubated mixture comprising said induced microorganism; resuspending said centrifuged microorganism in a breaking buffer comprising beads; rupturing said

microorganism in said breaking buffer under conditions sufficient to permit disruption of said microorganism and retention of said enzyme activity; centrifuging said breaking buffer after said rupturing; retaining the supernatant of said centrifuged breaking buffer; and adding a protein stabilizing agent to said supernatant;

recovering the proteins comprising said crude fraction by: adding a DNA precipitating agent to said crude fraction; centrifuging said crude extract containing said DNA precipitating agent; retaining the supernatant of said centrifuged crude extract; adding an amount of a protein precipitating agent to said supernatant of said centrifuged crude extract, where said amount of said protein precipitating agent permits about 48% fractional saturation; centrifuging said protein precipitating agent containing supernatant; retaining the supernatant of said centrifuged protein precipitating agent containing supernatant; adding an amount of a protein precipitating agent, where said amount of said protein precipitating agent permits about 75% fractional saturation; centrifuging said supernatant of said centrifuged protein precipitating agent containing supernatant; retaining the pellet resulting from said centrifugation; resuspending said pellet in a buffer; desalting said buffer; and concentrating the proteins comprising said resuspended pellet in said buffer;

fractionating said resuspended proteins by: loading said resuspended proteins onto a column comprising a material having an affinity for dehydrogenases, where said material is capable of reversibly associating with said dehydrogenases; waiting for a sufficient period of time to permit the proteins of said resuspended proteins capable of associating with said material to associate with said material; eluting in fractions said proteins associated with said material using an NADPH gradient; assaying each of said eluted fractions for said enzyme activity by performing said reduction; and pooling said eluted fractions having said enzyme activity;

fractionating said pooled eluted fractions by: desalting said pooled eluted fractions; loading said desalted pooled eluted fractions onto a column comprising an anion exchange material having an affinity for dehydrogenases, where said anion exchange material is capable of reversibly associating with said dehydrogenases; waiting for a sufficient period of time to permit the proteins of said desalted pooled

eluted fractions capable of associating with said anion exchange material to associate with said anion exchange material; eluting in fractions said proteins associated with said anion exchange material, where said eluting is by using a salt gradient; assaying each of said eluted fractions for said enzyme activity by performing said reduction; and pooling said eluted fractions having said enzyme activity;

fractionating said pooled eluted fractions from said column comprising said anion exchange material by: desalting said pooled eluted fractions from said column comprising said anion exchange material; loading said pooled eluted fractions onto a column comprising a weak anion exchange material having an affinity for dehydrogenases, where said weak anion exchange material is capable of reversibly associating with said dehydrogenases; waiting for a sufficient period of time to permit the proteins of said desalted pooled eluted fractions capable of associating with said weak anion exchange material to associate with said weak anion exchange material; eluting in fractions said proteins associated with said weak anion exchange material, where said eluting is by using a salt gradient; assaying each of said eluted fractions for said enzyme activity by performing said reduction; and pooling said eluted fractions having said enzyme activity;

fractionating said pooled eluted fractions from said column comprising said weak anion exchange material by: desalting said pooled eluted fractions from said column comprising said weak anion exchange material; concentrating said desalted fractions; loading said concentrated fractions onto a column comprising a size exclusion material, where said size exclusion material is capable of allowing the separable elution of a fraction comprising a polypeptide having a molecular weight of from about 110,000 D to about 200,000 D; and eluting a fraction comprising a polypeptide having a molecular weight of from about 110,000 D to about 200,000 D; and

recovering said polypeptide from said fraction eluted from said column comprising said size exclusion material.

3. (currently amended): The composition of matter as claimed in claim 1 wherein said fraction eluted from said size exclusion material ~~is capable of allowing~~

~~the separable elution of a fraction comprising~~ comprises a polypeptide having a molecular weight of from about 150,000 D to about 160,000 D.